In this proceeding, the FCC is proposing to allow unlicensed use of TV Whitespace. The stated goal is to promote broadband and consumer and business information services - presumably data, video, internet and other networking applications.

I highly agree with this idea. There is one drawback to this notion - that being that in this spectrum space, almost any consumer item that might be purchased retail, would have extensive "reach". The characteristic that makes this spectrum valuable and absolutely essential for the deployment of ubiquitous wireless services, is it's ability to penetrate outdoor obstacles, such as foliage, buildings, etc.

This same characteristic also creates a huge challenge, in that if a vast array of consumer items, like cordless phones, baby monitors, in home networking, or even on-campus networking is deployed in a non-directional topology, the "interference" reach is enormous, and will easily result in the first two or three users of any particular frequency spectrum preventing any additional use or deployments, due to wide area interference issues.

Unlicensed, at least to me, implies the ability for anyone, anywhere, to use this spectrum for ANY purpose. In the unlicensed spectrum, where Part-15 rules apply, in 900 mhz, 2.4 mhz, and 5 ghz, interference is rampant, often from devices which are "spectrum hogs" in that they use all available spectrum to accomplish very little. Often these devices are designed for robustness in interference rejection, which means they are relatively unaffected, but cause total disruption for any other use.

While appropriate spectrum (well below 1 ghz) is required if the Commission's stated goals of ubiquitious information services deployments can possibly become realized in any fashion, the Commission needs to use judgement and careful thought about rules governing its use.

Non-exclusive licensing, similar to that proposed for 3650 - 3700 Mhz, requiring licensing be restricted solely to

information services would accomplish this.

Alternatively, rules which allow only "outdoor" type of digital information or networking equipment to be used would accomplish the same.

Additionally, both TV Whitespace and 3650-3700 mhz present an opportunity for incredibly rapid innovantion, provided that some small adjustments to equipment certification rules could be made.

Across the nation, thousands of small, community, block, neighborhood, or even free public access networks have been built on commodity WiFi equipment. These networks are often not technically compliant with Part-15 rules, because individuals were able to innovate with software replacement, or removed consumer shells from retail or surplus retail (often obsolete) products and then reconstructed them suitable for outdoor use.

Today, "commodity" networking equipment cost is a tiny fraction of that of proprietary. It's often built on open standards, which has encouraged programmers (who may have no RF understanding ) to write software that, coupled with a pre-built networking modules and an inexpensive processor becomes a device that for very little money has technological capabilities that exceed even the imagined limits of just a decade ago. Often, they exceed the capabilities of any commercial products available, at any price.

However, technically, all this is "illegal", even though components which have already been tested and found completely compliant and within standard limits have their environment changed, and thus no longer technically comply with the certification methodology and rules.

These "illegal" devices often have technical capabilities that vastly exceed any certified products that a single manufacturer can create, because they are the collaborative work of thousands of people world-wide, using free tools and free software, and open standards.

I cannot more strongly encourage the FCC to consider a scheme of certification for WISP, Information SErvices Providers, etc, equipment that takes advantage of this incredibly enormous potential of the open and free world of ideas, talent, and innovation.

This could be accomplished with a "componentized" rules, where a nearly fully self-contained RF module, like a mini-pci card, is certified compliant to an RF profile, including out of band emissions, etc, and can then be controlled by anyone's software, who can then certify that it does not operate the rf module outside of it's certified limits. Then, antenna manufacturers could then certify the gain, and directionality and rf profiles of thier products, which would allow a simple profile matching and limiting process which would then produce a huge array of available, competitively priced and competitively featured, competitive quality combinations that have NO limits on the innovation and imaginations of the operators or programmers or individuals who can innovatively create their own unique and yet compliant solutions and services.

I urge the FCC to "unstrangle" the innovation of WISP's, ISP's, Information services with a ruleset which encourages, rather stifles, the free and open innovation of technology.